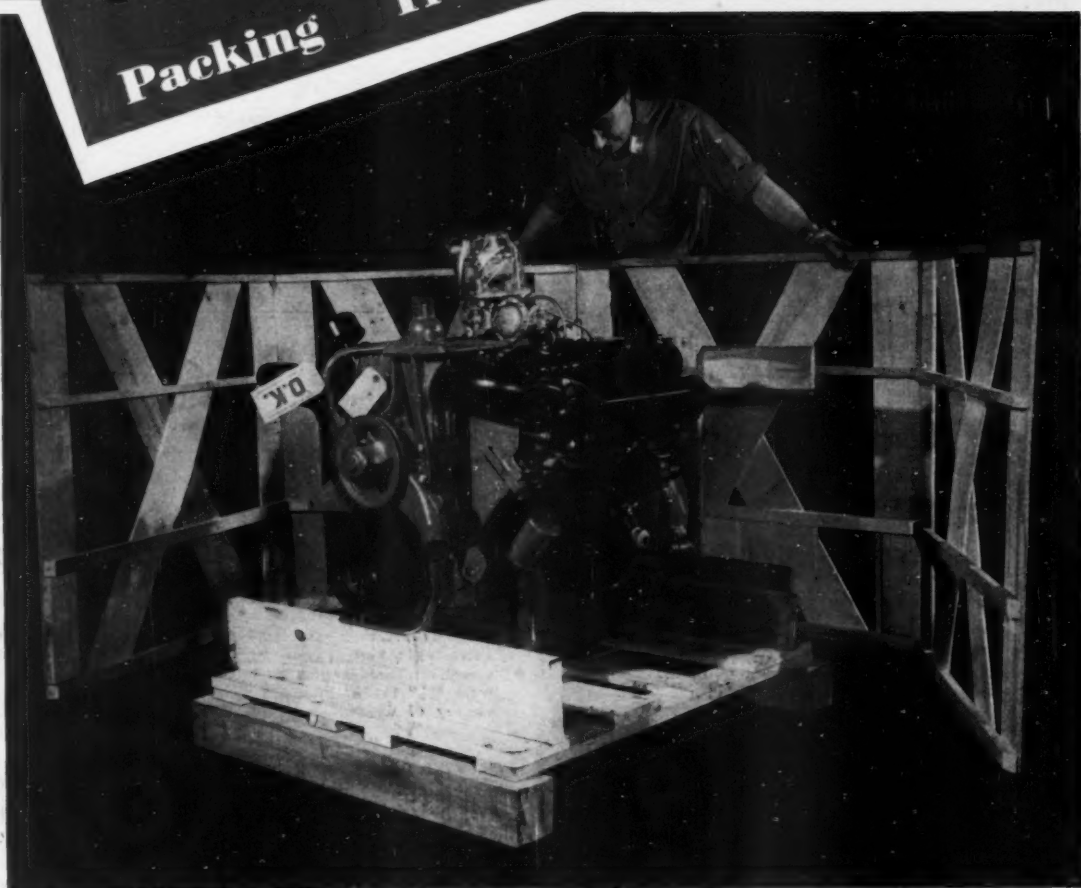


Shipping MANAGEMENT

Packing Transport Handling



An appropriate comment on the Ford Motor Company's 50th Anniversary Celebration this year, is the championship box used to pack its Lincoln engine. For the full story see page 14.

JULY 1953

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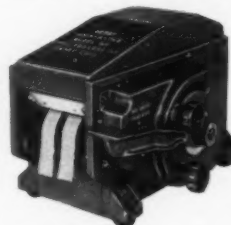
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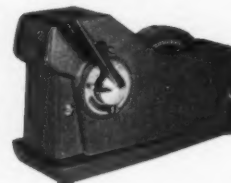
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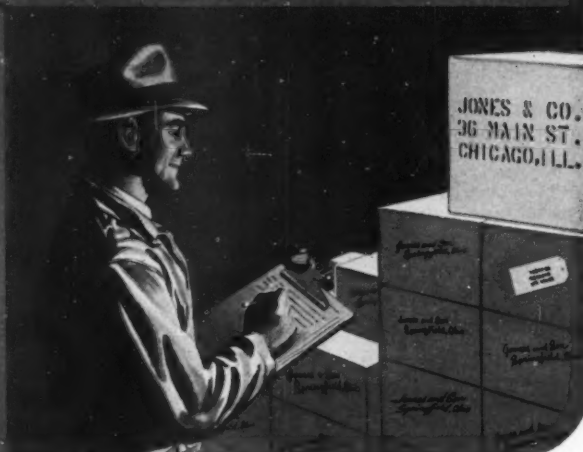


START YOUR SHIPMENTS RIGHT!

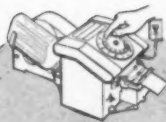
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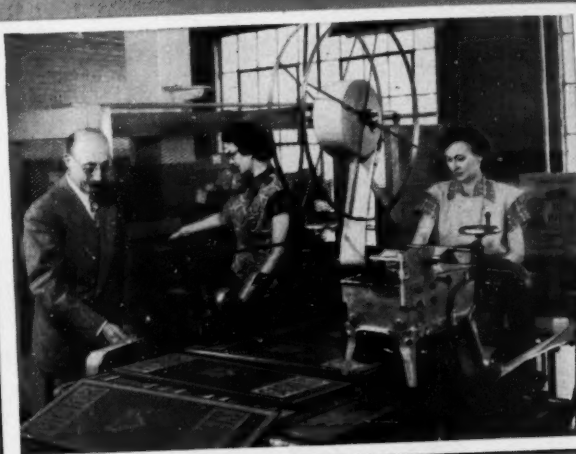
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MEN — METHODS — MATERIALS

case history



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is saving us
hundreds of dollars"**

...says Victor Mfg. & Gasket Co.
world's largest gasket manufacturer

Victor Mfg. & Gasket Co. recently designed automatic taping machines to seal their shipping containers. During the experimental period, Victor tested many brands of tape. Merchandising Manager A. J. Lukes, Jr., reports:

"Blue Ribbon Superstandard Gummed Tape is our choice. Its strong kraft enables us to save money by reducing the basic weight of the tape, thus getting extra footage of tape for the same money. Its fast-acting adhesive eliminates the high cost of wetting agents previously required. As a result Blue Ribbon is saving us hundreds of dollars a year.

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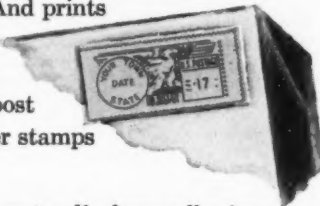
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Packing

A Punch.. By S. H.

TO KEYNOTE THE RECENT highly successful Fifth National Materials Handling Exposition, Neill Drake Partner, Drake, Startzman, Sheahan and Barclay, spoke on "Materials Handling Comes of Age". A few excerpts from this epoch-marking address, of particular interest to shipping and packing executives, are quoted in the paragraphs which follow.

By one definition, materials handling is age old, a function men have performed forever: pick it up, transport it, set it down. In another sense it is much more than that. It is something dynamic and changing. When we say materials handling, we think not only of moving something through plant and warehouse, but of moving it better today than yesterday, and still better tomorrow. There is a connotation of increasing economy, effectiveness, and service. We cannot talk about it without using words like "develop" and "improve". Perhaps "modern materials handling" is a more expensive term for what we have in mind.

In this sense, materials handling is a concept of recent origin. It would be idle to argue the date of its birth, yet we all recall that during the war, 10 years ago, it was in its infancy. The amazing thing is how it has grown. Just think back over the last ten years. Then look ahead to the next decade and imagine what it can bring.

Certainly the signs of maturity are unmistakable. The responsibilities that come with maturity must be faced. Evidence that materials handling is coming of age are all around us. This dinner, sponsored by the American Material Handling Society, 30 chapters and 3,000 members strong, yet founded only four years ago. Through its meetings, conferences, and strong organization, the Society has already taken the leadership in giving materials handling new status as an industrial function. This Exposition, first held six years ago and now the largest capital goods show in the country, with an expected record attendance this week of 30,000 people . . . Our materials handling equipment industry which dates further back, but without those advances in the last 10 or 15 years materials handling could never have been brought to its present high state of mechanization. Sales of this industry have climbed to well over a billion dollars a year, yet the potential market has scarcely been touched. Not only does it have a great future, but the developments it has fostered have been in large measure responsible for our materials handling progress. . . . Our

(Continued on Page 24)



JULY 1953

VOL. 18, No. 7

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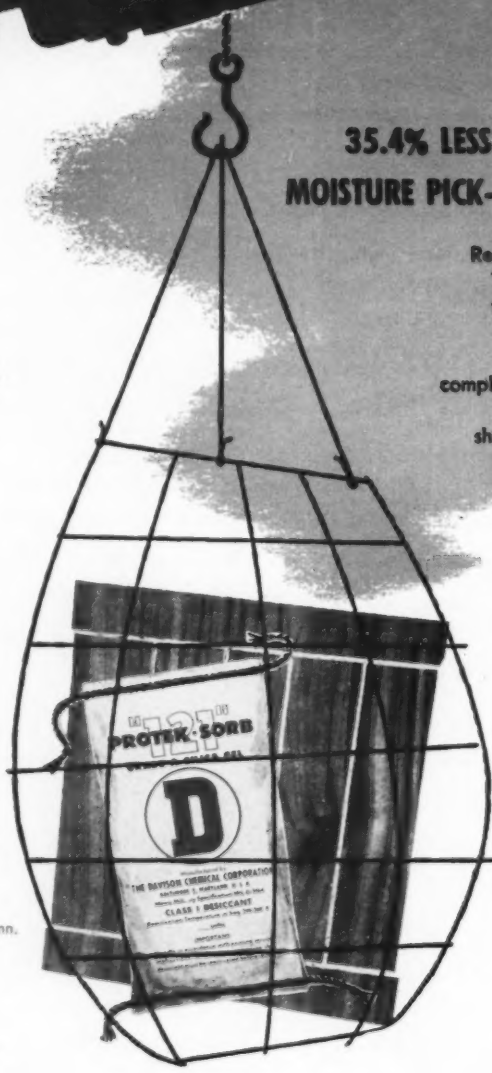
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Shipping MANAGEMENT

FOR SHIPPING AND TRAFFIC EXECUTIVES

425 FOURTH AVENUE, NEW YORK 16, N. Y.

JULY, 1953
VOLUME 18
NUMBER 7

Army Research Makes Possible Free Fall Aerial Delivery Of Liquids

By ALBERT V. GRUNDY, Chief, Container Laboratories,
Quartermaster Food and Container Institute, Chicago

IN THE SHORT SPACE of time allotted to each speaker representing the various armed forces on this panel, it is obvious that the subject item, namely: "The latest developments in military packaging" could not be fully covered. Therefore, those Army items of major significance which will serve to illustrate such recent developments will be briefly highlighted. The items are listed as follows:

[Mr. Grundy, at this point, outlined six Army items of major significance which, he said, served to illustrate such recent developments. Several of these developments were for highly specialized types of containers, and others were of an extremely technical nature. However, readers of SHIPPING MANAGEMENT will be interested in the discussion of containers used for aerial delivery of liquids which follows.]

Free Fall Aerial Delivery 5-Gallon Container

Because of the comparatively high cost of aerial delivery of supplies by parachute, the Quartermaster Corps had expended considerable effort toward development of other methods of aerial delivery. Probably the largest percentage by weight of supplies that are required for delivery by air are in the form of liquid with particular emphasis on fuels and lubricants.

Considerably over three years ago a number of different types of containers were experimented with in an effort to find something that would be suitable for free drop of gasoline, diesel oil or lubricant oil. Although some of these items were fairly successful at very low altitudes and low speeds, nothing with very great promise appeared until about one year ago. At that time Quartermaster Corps, with the cooperation of industry, developed a circular disk shaped item which showed considerable promise. This container, which is approximately 3 feet in diameter, takes the appearance of a large sized discus when filled with five gallons of gasoline. The discus should be familiar to all those persons who follow track and field events in the Olympic games.

Delivered at the Packaging and Materials Handling "Short Course" jointly conducted by the Society of Industrial Packaging and Materials Handling Engineers and the College of Mechanical Engineering, University of Illinois, Extension Division, at Chicago Coliseum, October 13 thru 16, 1952.

When ejected from an aircraft the filled container falls with the flat side approximately parallel to the ground. On striking the earth, it expands to approximately twice its relaxed size and in this expansion dissipates a large part of the force of gravity which would otherwise tend to destroy the container. Surprisingly, the container does not bounce very far and as a matter of fact at higher altitudes it has been known to bounce backward rather than with the path of flight of the carrying aircraft. Hand made Prototypes of this container have been successfully dropped from altitudes between

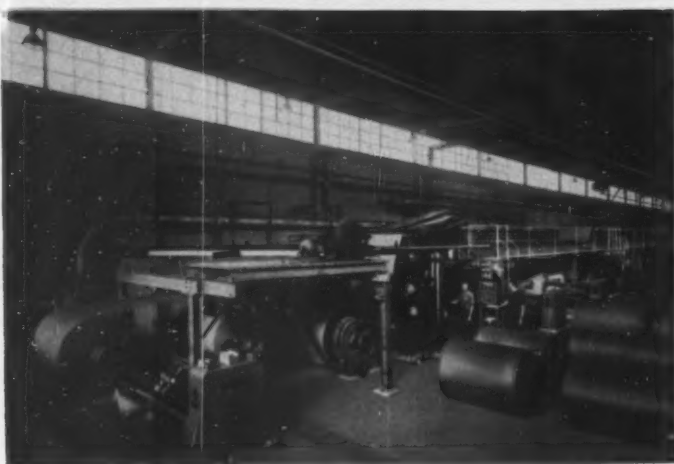
(Continued on Page 23)

Pen Is Wrapped Under Water With New Packaging Material



Photo & Data Courtesy Sherman Paper Products Corporation

New packaging material wraps pen under-water at the National Packaging Exposition at Navy Pier. The new paper is coated with a special film of rubber which adheres only to itself.



From fast spinning rolls seen above machines like this one in a Robert Gair Company Canadian mill combine top and bottom liners and a fluted middle sheet into a square mile of corrugated paper every day.

As complete an account as has ever been rendered of the history, size, holdings and operations of "A Big Company In A Very Large Industry" was presented in a recently issued book of limited circulation by Robert Gair Company, Inc. Although the book is not presently available to the general public "Shipping Management" has received permission to present a most interesting chapter, and several photographs from this handsomely illustrated volume.

IN THEORY AT LEAST, the manufacture of corrugated board is simple. A sheet of paperboard known as corrugating material and made largely for Robert Gair Company on its Four-drinier machines at its Thames River and Port Wentworth mills, is run between two heavy rollers, each lengthwise deeply grooved and fitting together like a wide pair of gears, so that the paperboard which went in flat comes out fluted. Then two other flat sheets, from the Company's Port Wentworth mill near Savannah, known as kraft liners, are passed over and under the fluted corrugated sheet and glued into position, to make a sort of corrugated sandwich which passes between steam-heated plates and heavy cotton blankets until it is thoroughly dried. These machines can be set to make double-decker corrugated sandwiches for extra strength, with two layers of fluted paper between three binding liners.

The arch construction of the corrugated sheet, held firmly by the top and bottom liners, gives remark-

The Making Of Under Modern

able strength and resilience to withstand hard knocks and rough handling. Its lightness and economy in both shipping space and cost are added qualities which have wrought a fundamental change in the transportation of goods.

The simplicity of the theory of making corrugated sheets and boxes is perversely belied by the complexity of the huge machines which make it. For instance, an observer at Gair's newest corrugated box plant stands besides a machine 294 feet long—as long as a football field—and watches it roll out each hour enough corrugated sheets to carpet a football field twice over.

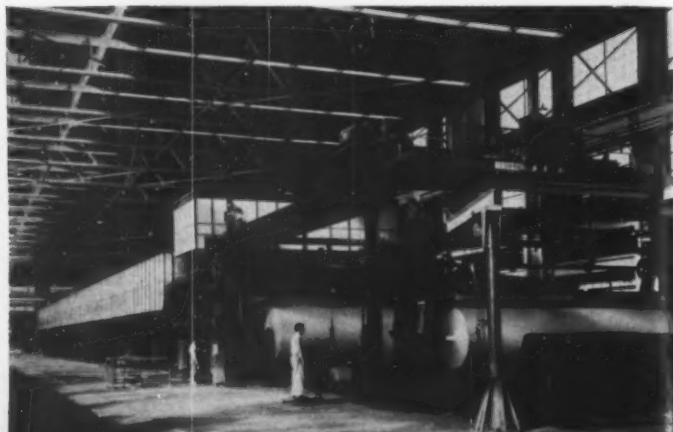
Other Plants

In addition to Teterboro, the Gair Company produces corrugated shipping containers in plants at Portland, Conn.; at Cambridge and Holyoke, Mass.; at Syracuse and North Tonawanda, N. Y.; at Richmond and Martinsville, Va., both operated by a subsidiary, Fibre Board Container Corporation; at Philadelphia, Pa.; and at Cleveland O., and produces solid fibre shipping containers at Bogota, N. J. In Canada corrugated box plants operated by Gair Company Canada Limited, are at London, Hamilton and Toronto, Ont.

Rapid Production

In these plants the Company operates 12 machines known as corrugators, for making corrugated sheets, which together produce approximately nine million square feet per day. Though technically intricate, it is a very rapid production. The big corrugators like the ones at Teterboro can transform the giant rolls of kraft liners and corrugating material into corrugated sheets at the rate of 500 linear feet a minute.

In most of the company's plants, the corrugated



Left: The 100-yard length of a kraft liner machine turns the liquid mass at the "wet" end into self-supporting paperboard in the center and rolls out sheets of the toughest, strongest kind of paperboard at its delivery point, ready to be sent to the corrugators. The process is almost wholly automatic.

Shipping Containers Machine Conditions

sheet moves on through other machines which cut and crease it into tailor-made shapes to make folding shipping containers particularly suited to the special conditions they will meet in transit and to the goods they will carry. These go on to presses which print the customer-company's name and advertising design, then through other machines which fasten the blanks with staples, glue or tape into boxes that, shipped flat, can be instantly opened into containers.

In the entire industry in 1951, more than seven billion paperboard shipping containers in many sizes



The rolls of kraft paper which supply the company's twelve corrugating machines come from its mammoth mill on the Savannah River in Georgia. A few minutes and some 300 feet back in time and space from this picture these huge rolls were a gushing stream of wood fibre, chemicals and water. Here they are being prepared for shipment.

and shapes were made. Such containers have largely displaced other materials for protection of goods in transit.

Containers Perform Many Services

Seven billion shipping containers means about 44 each year for each member of the United States population. Yet unless you are changing your home and watch the movers carry in a couple of dozen flat, folded containers under their arms and open them into capacious packing boxes, or chance to see a truck unloading at the supply door of a store, you are not apt to be aware of the scope of the uses to which corrugated shipping containers are put. And when in your new home you unpack your belongings and collapse the packing boxes and put them handily away for future use, you will appreciate their convenience compared with, for instance, boxes and crates made of wood.

Sturdily tough yet resilient, light almost as a feather yet able to carry heavy loads, corrugated shipping containers are being used for a constantly increasing service in American life.

New Postal Ruling On Packages

An order issued by Postmaster General Arthur E. Summerfield is designed to make it easier for the average postal patron to mail sealed parcels containing merchandise.

Effective immediately, the inscription authorizing the opening of a sealed parcel for postal inspection may be handstamped, typewritten, or handwritten, and the endorsement has been shortened to "CONTENTS: MERCHANDISE. MAY BE OPENED FOR POSTAL INSPECTION." This inscription should be placed either above or below the sender's return address.

"This action is being taken," Mr. Summerfield stated, "because it is realized that the general public, which mails parcels only occasionally, does not always have readily available the printed label formerly needed on sealed parcels. In the past, a patron has often been seriously inconvenienced because he did not happen to have in his possession the required printed sticker.

"It is hoped, however, that the public will use every precaution to see to it that the necessary endorsement, along with the sender's address, is placed on parcels in the proper position and absolutely legible; otherwise, confusion might arise and packages might be charged with postage due at the first-class rate."

Mailers who regularly prepare sealed parcels of third- or fourth-class matter are urged to continue placing the endorsement thereon in print.

Case History Of A Champion Shipping Package

ON OUR COVER:

THE Lincoln engine, shown in process of having a one-piece wirebound "mat" wrapped around it, on our cover of the month, is also shown in various phases of being packed in its light-weight wirebound container on these pages. The photo cover is repeated, third photo down, in the strip at the right. Appropriately enough, George J. Weiler of the Ford Engine and Foundry Division, developed this prizewinning container in Wirebounds Division of the Protective Packaging Competition, just in time to coincide with the celebration of the 50th Anniversary of the founding of the Ford Motor Company.

THE MATERIAL HANDLING UNIT of the Engine and Foundry Division of the Ford Motor Co. at Dearborn, Michigan, has been asked the question:

"What makes a champion shipping container?"

It is well qualified to give the answer because the first prize in the wirebound box and crate division of last October's protective packaging contest conducted by the Society of Industrial Packaging and Materials Handling Engineers was a wirebound crate used to ship 786-pound engine assemblies for Lincoln automobiles.

How Savings Effected

The prize-winner was entered in the contest by George J. Weiler, materials handling engineer of the Ford Engine and Foundry Division. His official entry blank revealed that the Division formerly used a heavier, bulkier, and more expensive crate and that the conversion to the scientifically engineered wirebound crate resulted in a reduction of shipping container tare weight from 190 to 100 pounds, or almost 50 percent; savings of 35 percent in material, freight, and labor; appreciable savings of floor space, an important factor in warehousing and storage; elimination of shipping damage claims; savings in labor in packing and unpacking, and other benefits.

Pack Is Car Engine

Packing a Lincoln engine assembly in championship wirebound crate requires only 11 man-minutes, a reduction of more than 63 percent from the 30 man-minutes required with the old crate.

An industrial power truck with derrick attachment

lowers the complete engine assembly onto the skid-type base of the wire-bound crate so that the 786-pound load rests upon and "floats" from two heavy timbers nailed to the base proper. One end of the engine is firmly secured to the crate base by means of two pre-placed protruding bolts. The other end rests upon the other timber, which is pre-cut to form a snug cradle.

To that end is bolted prefabricated sturdy wooden special interior packing design so it snugly engages and is further secured by the side of the crate itself.

Once the engine is attached to the crate base, the rest of the packing procedure is fast and easy. The specially engineered wirebound wrap-around "mat" that comprises the four sides of the crate, one of them with



Here is the prizewinning wirebound pack as it looked at the SIPMHE exhibit, winner of the First Prize, Group 3, Wirebound Box Division. The pictures above the actual model showed various stages in assembling and handling the lightweight pack.

specially attached wooden members to engage the interior packing bolted to one end of the engine, is then folded into shape and placed around the engine and crate base so its bottom end cleats snugly engage the later. The "mat" is closed with wire-loop fasteners and secured to the base.

After heavy protective paper has been placed over the engine assembly, the top of the crate is placed and nailed in position and the package is ready for shipment.

On his official SIPMHE entry blank, Weiler said, in part:

"Advantages of package: economy in materials, reduction in tare weight, labor savings in packing and unpacking, rigidity and strength in construction, ease of handling, stacking strength; damage claims eliminated; savings of 35% in material, freight, and labor."

"Explanation: This container was impact-tested in two direction through Zone 5 of the standard railroad test; a compression test was made by placing 1500 pounds on top of one container; results 100% satisfactory; container can be re-used to return engine for overhaul; tare weight of container has been reduced 90 pounds from original crate construction; container saves floor space as compared to wood crate; attractive for showroom display; engine can be unpacked quickly with minimum of tools."

E. J. Salay, Supervisor, Material Handling Unit, said that the various economy factors of the conversion to wirebound crates resulted in an over-all packing-for-shipment savings of 35%. These factors include the reduction of packing man-time from 30 to 11 minutes per engine; a 20% reduction in original container costs; elimination of steel strapping formerly required, and a 20% saving in floor space through more compact storage of crates before use and higher stacking of packaged engines.

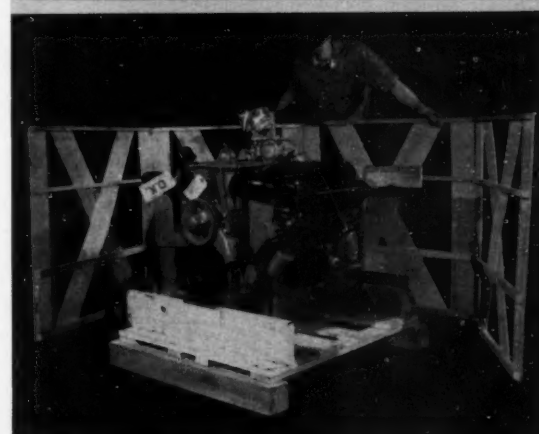
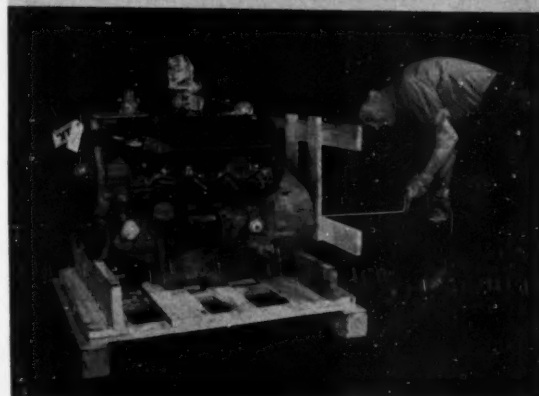
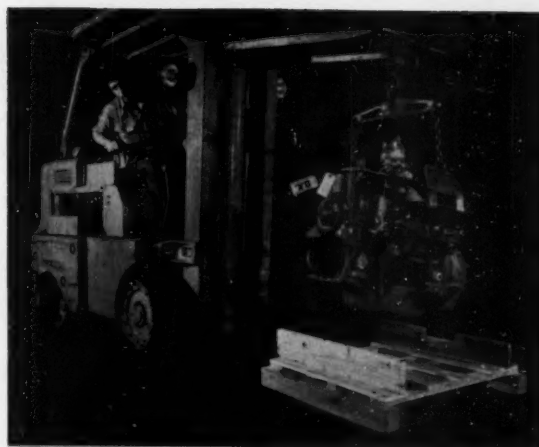
Salay also pointed out that the 90-pound reduction in tare weight is of considerable monetary importance because the average freight rate for engines is about \$2.50 per 100 pounds.

1. Top, Right. The scientifically engineered and fully prefabricated base of the champion wirebound crate is here about to receive a 786-pound Lincoln engine assembly. Note the two bolts protruding upwards from the supporting timber in the foreground, which will hold the engine tight and secure. Note also the skid-type construction for quick and easy handling by power truck.

2. The Lincoln engine assembly literally "floats" on the base of its wirebound shipping container, as shown here. A sturdy piece of wooden interior packing is being bolted in place. It will rest against and engage the side of the crate as further protection against vibration, shocks, and jars during shipment and handling.

3. This relatively light and easily placed one-piece wirebound "mat" largely explains the 35 percent saving in over-all packing and shipping costs. The one-piece "mat" comprises all four sides of the crate, is shipped and stored flat in a minimum of space before use, and is quickly and easily folded into shape and placed in position as shown here.

4. Another champion crate proudly starts its journey from the Dearborn Engine Plant of the Ford Motor Co. Only 11 man-minutes for packing have elapsed since the engine assembly was placed upon the base of this wirebound crate at the start of packing.



Package Engineer Activities

J. W. Kraus Chairs SIPMHE Short Course This Year

John W. Kraus of Thompson Products, Inc., Cleveland, a charter member of the Northeastern Ohio Division of the Society of Industrial Packaging and Materials Handling Engineers, has been named chairman of the technical short course that will be presented next October by SIPMHE and his alma mater, Massachusetts Institute of Technology.



John W. Kraus, shown above, is the chairman of this year's SIPMHE technical short course. He has been identified with the organization since its founding, in 1947.

Kraus, who is supervisor of quality control and packaging engineering for the accessories division of Thompson Products, Inc., graduated from M.I.T. in 1941 as a bachelor of science in general engineering.

Kraus has been identified with the Northeastern Ohio Division of SIPMHE since it was started in 1947 and has served in various offices. In 1948, 1949, and 1950, he was a judge in the annual packaging and materials handling competition and was a chairman of judges in last October's competition at Chicago.

Heavy Unit Loads Studied By Pittsburgh AMHS Group

Materials handling techniques involving unit loads of from 50 to 100,000 pounds were the subject of a paper delivered recently by Allen K. Strong, Head of Chemical Construction Corporation's Materials Handling Group. Mr. Strong presented the paper before the Pittsburgh Chapter of the American Materials Handling Society.

He discussed costs and problems in moving formed solids; dry, granular and free-flowing solids; and liquids.

Mr. Strong was president of the Society from 1949 to 1950, President of its New York Chapter from 1951 to 1952, and is now director of the Chapter.

Montreal AMHS Chapter To Hold Its Own Show In Nov.

Sponsored by the American Material Handling Society, Montreal Chapter, the annual Montreal Materials Handling Show will be held in the Show Mart Building, November 9th to 13th, 1953, combined with the Montreal Tool and Equipment Show in co-operation with the Foreman's Club under whose auspices both Shows have been held in the past.

Mr. L. J. Stock, President of the Materials Handling Society, Montreal, completed the arrangement and advised that a special committee of the Society would confer with the management to provide educational features and arrange sessions at the Show. The Society will have their own booth.

1953 "Short Course" to Stress Elementals of Packaging

The 1953 intensive technical short course to be presented cooperatively next October by the Massachusetts Institute of Technology and the Society of Industrial Packaging and Materials Handling Engineers will offer a wide selection of topics of interest to both junior and senior engineers.



Helping to arrange the 1953 technical short course are these members of the advisory committee at a meeting in Boston. From left to right are M. J. Odell, Angier Corp., Framingham, Mass.; E. J. Kingsland, H G. Davis, Inc., Boston; John W. Kraus, Thompson Products Co., Cleveland, chairman of the committee; R S. Wade, Sherman Paper Products Corp., Newton Upper Falls, Mass.; A. J. Jordan, Atlas Plywood Corp., Phillipsdale, R. I., and Nicholas Campanaro, Better Packages, Inc., Boston.

This was definitely decided at a meeting of the MIT-SIPMHE Short Course Advisory Committee held recently at the Somerset Hotel in Boston.

The committee voted to present sessions on elementary problems of protective packaging and materials handling concurrent with sessions on advanced and more technical topics. The curricula will be designed so that the elementary and advanced segments of the course will join together in the closing sessions.

John W. Kraus of the Thompson Products Co.,

(Continued on Page 29)

Regularity in storing bottle cases on pallets has simplified inventory taking at the Standard Brewing Company in Cleveland. Company uses a transtacking driver-led electric truck, to speed handling of cartons and raw materials in its third floor storage area.



Photo & Data Courtesy Automatic Transportation Co.

Use of Single Power Truck Saves 40% For Small Firm

Standard Brewing Company
Cleveland, Ohio

A SINGLE INDUSTRIAL TRUCK and a palletization achieved a 40 per cent saving in storage space at the Standard Brewing Company in Cleveland.

The 52-year old Standard brewery, serving the greater Cleveland area, operates in a modern, efficient three-story building into which it moved in 1949. Although most of its materials handling is done by conveyor, it wasn't until February, 1951, that Standard instituted palletization of bottle cartons in its third-floor, 32,000 square-foot storage area.

Fred J. Belcher, Standard's bottling superintendent, pointed out that prior to palletization, cartons could be stored only 10 high, using hand labor.

Bottle cases are now loaded 72 to a pallet and are stored up to 23 cases high, using a driver-led electric-powered truck.

Conveyors, leading down from the third floor, are fed by pallet loads via the electric-powered truck.

Belcher said the system is particularly valuable during the spring and fall, when Standard's biggest handling problems arise. "Spring activity centers around getting ready for the increased summer demand. During the fall, extra bottle cases are moved into storage.

Belcher said the system is particularly valuable dur-

ing the spring and fall, when Standard's biggest handling problems arise. "Spring activity centers around getting ready for the increased summer demand. During the fall, extra bottle cases are moved into storage. Our palletization system not only speeds this work, but because of standard pallet loads greatly simplifies inventory taking."

The power truck also is used in the handling and moving of caustic soda drums and cases of bottle crowns and can lids.

The 400-pound drums, stored on the third floor until needed are loaded four to a pallet, and stacked three pallets high to one corner of the area.

Bottle crowns and can lids, because of the danger of damage, are stored only one pallet high, 50 boxes to the pallet.

Belcher explained that use of the power truck is not limited to the third floor storage area. The truck is also used for transporting incoming bottles and raw materials from Standard's truck dock and rail siding to the third floor. Truck loading of the finished product is accomplished by conveyors, which lead directly from the processing lines.

D. R. Dominic's

"LISTEN, Mr. Traffic Manager."



WITH THE SUMMER SEASON well on us, the advent of warm weather creates a tremendous hazard to those shippers of perishable materials. Perishables are usually thought of in terms of food products such as, oranges, bananas and so forth which can become affected and destroyed by extremes in temperature, it is no question but what attention must be given to these particular shipments so that market value in time of arrival is as high as possible.

The fact that the material itself is conducive to spoilage does not relieve the carrier from liability for that spoilage where the carrier fails to do anything to prevent same. Negligence on the part of either carrier or shipper has been considered the cause of loss and not the inherent nature of the goods.

Inasmuch as the carrier could conceivably claim that material was partially spoiled or could not stand up for a period of normal transportation. In any event the burden of proof, as we see it, lies strictly with the carrier, and it is his responsibility to check the material if possible at time of loading, and to do all within his power to preserve the material en-route.

Even when a carrier's tariffs do not include refrigeration, he should exercise due care in transporting the materials to the best of his ability. It has been held that a carrier would not be negligent if he treated the material as if it were his own. The cartage of perishable material places upon the carrier a much higher degree of responsibility than if they were non-perishable. If a carrier does nothing whatsoever about perishables, he is in fact considered negligent, and a claim could be filed against him, if material is damaged or spoiled.

One factor which must be considered in any claim action pertaining to perishables is that acceptance of this material by a carrier for transportation implies that this carrier can transport and care for the material tended to him. If the carrier accepts material which requires refrigeration and does not have the facilities to so refrigerate, he in turn is liable for the entire shipment. On the other hand if a carrier's tariff indicates that he is equipped to handle refrigerated supplies, he

must make available to the shipper cars of that nature.

A carrier may and should refuse shipments of a perishable nature if his tariff does not call for such a service.

So far we have dealt with perishables which are in the nature of foods and foodstuffs. However, there are

(Continued on Page 25)

Materials Handling Discussed From Every Angle In New Book

Materials Handling, by John R. Immer, McGraw-Hill Book Company, \$8.

THE "LAST FRONTIER" of industrial engineering is thoroughly explored in this book. Since 25% is a conservative estimate of the portion of wages spent by industry for materials handling, here is the region where the greatest savings are still possible.

Materials handling, which the author defines as "the preparation, placing, and positioning of materials to facilitate their movement or storage," cannot be separated from plan layout, time-motion study, cost-accounting, warehousing, and transportation, and the author wisely insists on handling the entire productive operation as a unit. Declaring that "maximum economy in the movement of materials is achieved by an over-all approach to handling," the author, who is professor of Industrial Management and Assistant Director of the Division of Business Studies of the American University, stresses analysis and integration throughout. At the cost of some repetition, he proves both the importance and the complexity of his subject.

The best praise that can be given the book is that

(Continued on Page 26)

Giant Lift Trucks Shown Lined Up In European Mill

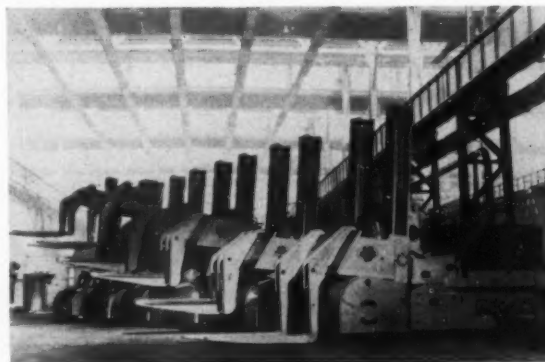


Photo & Data Courtesy Automatic Transportation Co.

Six of the seven giant fork trucks shipped by an American manufacturer of electric industrial trucks, shown at the largest strip mill on the European continent, the S.O.L.L.A.C. plant (Societe Anonyme de Lorraine de Laminage Continu) in Alsace, France. Shipped last year, the trucks were put into operation in September. Full production at the plant is expected by mid-1953. The trucks shown can handle up to 40,000-pound loads by either fork or ram.

**NWBA HOLDS ANNUAL
SUMMER MEETING**

Recreation and business sessions were successfully combined at National Wooden Box Association's annual summer meeting held June 18 and 19 at The Greenbrier Hotel, White Sulphur Springs, West Virginia. Representatives from all areas comprising the association membership attended the meeting.

An ammunition box session held the morning of the 18th revealed that hardware requirements are being brought more closely in line with ordnance requirements through increased production facilities. Six representatives from ordnance plant operating companies and five ammunition box hardware manufacturers were represented in addition to personnel from some of the country's largest ammunition box making plants. The steel shortage which threatened hardware supplies several months ago appears to be lessening. While some shortages of hinge and hasp type hardware were reported, supplies of bolt type hardware appear adequate at least on a day to day basis.

**AUTOMATIC NAMES DEBENHAM
INDUSTRIAL RELATIONS DIRECTOR**

Appointment of Roger H. Debenham as director of industrial relations for Automatic Transportation Company, has been announced by John A. Baldinger, general manager.

Debenham will be in charge of administering a complete personnel program for the firm. For the past seven years he has been manager of industrial relations for Appleton Electric Company, Chicago.

**E. W. PRESTON NAMED SALES MGR.
PACKING MATERIALS CORP.**

Mr. Eugene W. Preston has been named General Sales Manager of the Packaging Materials Corporation of New York, N. Y. Mr. Preston was formerly General Sales Manager of The Sherman Paper Products Corporation.

**CLARK EXPANDS DEALER ORG.
TO HANDLE ROSS LINE**

Clark Equipment Company has revamped and expanded its dealer organization in the mid-west and on the west coast to handle its newly-acquired Ross straddle trucks and fork-truck lines, according to an announcement by W. E. Schirmer, vice president.

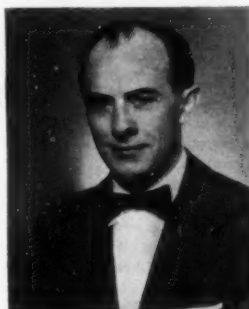
Clark Equipment Company acquired The Ross Carrier Company earlier this year (May, 1953).

The new dealer plan, which became effective on July 1, 1953, affects Clark dealer organizations in the states of

California, Illinois, Indiana, Iowa, Michigan, Nebraska, Oklahoma, Oregon, and Washington. In most cases, existing Clark dealers will add Ross products to their regular sales and service activities.

**G. A. BOWEN, JR. NAMED ASST
ADV. MGR., ROBERT GAIR CO.**

Wilbur F. Howell, secretary of Robert Gair Company, Inc., manufacturers of folding cartons, paperboard and shipping containers has announced the appointment of George A. Bowen, Jr., as assistant advertising manager.

**GEORGE A. BOWEN, JR.**

Mr. Bowen was formerly in the advertising department at Otis Elevator Co.

**FIRST CONVEYOR INSTITUTE
EXAMINES INDUSTRY COMPLETELY**

More than 275 engineers from 15 states attended a Conveyor Institute jointly sponsored by the University of Illinois and the Conveyor Equipment Manufacturers Association at Champaign-Urbana, Ill., recently.

A unique feature of the three-day short course was an iron-clad prohibition against mention of any conveyor company name or brand, although more than 70 representatives of 29 conveyor manufacturing companies participated as speakers and panel members. The objective was to acquaint users and prospective users with the versatility and practicability of the conveyor in coping with materials handling problems.

The institute was a pioneer experiment in adult education as a public relations medium for the rapidly growing industry. Questionnaires filled out, anonymously, at the last session showed that 95 per cent of the enrollees found the sessions "very valuable." Even before the institute was held, CEMA received three invitations for similar institutes at other universities, and repetition in other areas of the country is now a possibility, according to R. C. Sollenberger, Executive Vice President of the Association.

Simultaneous sessions were held for

four types of users; A—bulk handling of medium to heavy materials such as ore, stone and gravel; B—bulk handling of light to medium materials such as grain, chemicals and wood pulp; C—unit handling of consumer goods such as cans, bottles and bags; and D—unit handling of durable goods for fabricating, processing, storing and shipping.

More than 600 photographs, diagrams and charts were projected by speakers as visual aids at the 36 group sessions. As a general pattern each session was 90 minutes, with four speakers and a moderator. Prepared visual presentations took about half of each session, and the remaining time was left for questions.

"Materials handling constitutes the greatest single area for marked cost reduction in production and distribution," Mr. Sollenberger said at the opening luncheon of the institute. "Human muscle power costs \$10 a horse-power-hour compared to 3 cents for electrical energy for a mechanical conveying system.

He said that a 1953 automobile would have a price tag of \$50,000 if it were made by hand.

**S. VERE SMITH, CHAIRMAN OF
BOARD, BINNEY & SMITH CO.**

Sidney Vere Smith, Chairman of the Board of Binney Smith Co. New York, died on Thursday, June 11th, 1953. Mr. Smith was the son of one of the founders of the Binney Smith Co. and had been with the company for 41 years.

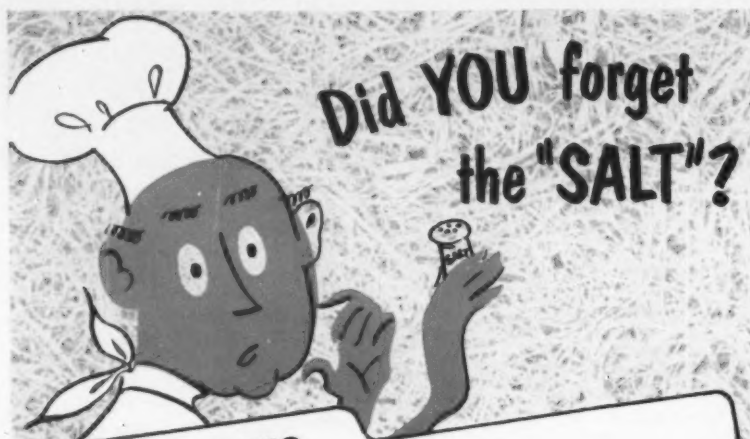
Among Mr. Smith's interests was the continuous development and progress of art education. His enthusiasm and hearty cooperation in art activities are well known to educators from coast to coast.

**ATA COMMITTEE CONSIDERS
FREIGHT CLASSIFICATIONS
AT D. C. MEETING**

Detailed consideration of freight classification ratings, Federal and state rules and regulations governing motor transport, and other traffic problems confronting the nation's common carriers by truck, highlighted the second meeting of the trucking industry's recently organized National Traffic Committee.

The meeting was held May 6th in the Statler Hotel, Washington, D. C., and the full membership of the committee, which numbers 100 and is elected annually to represent more than 5200 carriers participating in National Motor Freight Classification, attended. The committee, which was established under the National Motor Freight Traffic Agreement, was elected in June 1952.

A leading topic on the committee's agenda was a discussion of the classification policies being followed in the



CAR LOADING

INGREDIENTS FOR PERFECT SHIPPING

- Clean and prepare car carefully
- Make detailed loading plan
- Use efficient bonded block load pattern or other proved method of unitizing
- Bulkhead and brace adequately
- Check continuously for tight load
- Use suitable dividers between sections of different size cases
- CUSHION END-WALLS with heavy PROTEX blankets to absorb shock
- CUSHION FLOORS or RACKS with PROTEX blankets to protect load against snagging

The proper mixture of the above will give perfect results only if that final bit of seasoning, called cushioning, is added. Without it, end crushing, floor snagging and resulting saw-toothing of containers with its accompanying damage is sure to occur even with normal handling.



Superior Cushioning BLANKETS FOR

CUSHIONING FLOORS. PROTEX blankets will take the snag out of the roughest floors and floor racks and more than that, they absorb vertical shock and oscillation.

CUSHIONING END WALLS. The tightest load will normally shift from 5" to 7" from end to end. PROTEX blankets cushion this shock indefinitely.

The application of PROTEX Superior Cushioning Blankets is simple and will cost no more and probably less than your present methods.

Consult us — on how to virtually eliminate telescoping, snagging and crushing of bottled and canned goods shipments. PROTEX blankets more than pay for their cost in damages saved.

AMERICAN EXCELSIOR CORPORATION

1000 North Halsted Street • Chicago 22, Illinois

NATIONWIDE SALES & DISTRIBUTION

NMFC A-1, which was published to provide motor carriers with a publication competitive with the rail Uniform Freight Classification No. 1. This question has been brought into sharp focus by the increased motor carrier use of the A-1, east of the Rocky Mountains, in connection with new or revised rate scales and the cancellation of "exceptions" of long standing. Particularly acute, was the problem of establishing a reasonable classification basis for so-called "light and bulky" or "balloon" freight under the accelerated program of the National Classification Board.

Also under consideration was the position to be taken on behalf of the carriers in the western portion of the U.S. regarding recent activities in the ICC's investigation of rail class rates and classification in Mountain Pacific territory.

C. T. CACKLEY, WAS TECHNICAL DIRECTOR, NWBA

Clairbourne T. Cackley, for the last ten years a member of the staff of National Wooden Box Association, died on June 18 after an illness of several months. During the last two years he served also as Secretary of National Wooden Pallet Manufacturers Association. He was 48 years of age.



C. T. CACKLEY

His name has long been connected with the packing and packaging industry. Mr. Cackley's position on the National Wooden Box Association staff for the past five years has been that of Technical Director. Prior to joining the association staff he had devoted 11 years to the production and sale of agricultural packages in the market adjacent to Benton Harbor, Michigan.

DELIVERY OF NEW FREIGHT CARS CONTINUES TO EXCEED 6,000

May deliveries of new domestic freight cars totaled 6,582, as compared with 6,839 in April 1953 and 6,857 in May, 1952, the American Railway Car Institute and the Association of American Railroads announced jointly.

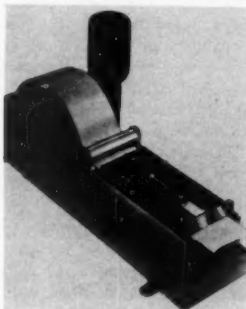
The announcement added that orders for 1,651 freight cars were placed by the railroads in May. The backlog of cars on order as of June was 57,345.

NEW PRODUCTS & LITERATURE



REINFORCED TAPE DISPENSER

The Handy Dispenser, a pull and tear machine for hard to cut gummed tapes is now being manufactured with new additional features by the Ideal Stencil Machine Co.



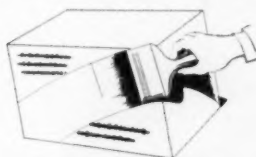
A sliding rubber button delivers tape quickly and surely . . . fingers don't touch the tape until it is ready to "pull and tear".

An extra large, visible water reservoir holds a reserve supply and is easily re-filled.

When a strip of tape is pulled up for tearing from the roll, an automatic brake locks the tape in place . . . assures a clean, even tear of the tape.

RE-SURFACING CARTONS

Cartons may be re-used again and again through use of a patented liquid re-surfacer called Covermark which is marketed by The W. H. Alexander Co.



The material, which comes in quart and gallon cans, is brushed or sprayed on to blend with the usual color of cartons. After it dries the carton may once again be addressed for shipping, or over-printed in the usual fashion.

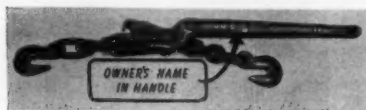
The manufacturers claim that Covermark covers everything: stencilling, labels, printing and crayons, or any surface, as for instance, cartons, crates, cases and drums.

OWNER'S NAME ON BINDER

Load Binders have an unfortunate way of getting lost, strayed, or stolen. No one knows this better than the man who buys them, for the cost of missing binders can amount into fancy figures.

To stop this disappearing act, the

Canton Manufacturing Company, load binder specialists, have developed a process to put the owner's name in the handle. Test cases have shown large and small users reporting 50 to 100% savings by thus cutting off theft and loss. Now plainly identified as the owner's property, binders are far less apt to go astray. The new name process will be of interest to small quantity purchasers via a first order charge running from 15c down to 3c each. Up to 40 letters can be used for name, city, state.



Established national distributors sell the Canton line, but load binder users interested in the name on the handle process are asked to write the factory direct for information.

JET TAPER

Better packages has announced a special 500 series Counterboy model designed specifically for the new Jet Tape. This tape is manufactured with a single strand of string embedded in the glue slide for easy opening.

The Counterboy Jet Taper, in addition to regular Counterboy Adjustable Moistening Control, has the ability to dispense and cut a tab in the end of the tape strip. This allows the string embedded in the tape to be grasped and torn through the tape for easy opening of the carton.

This model can be adjusted for widths from 2" to 4". For selective or repeat Measuring from 4" to 50".

TEAR-STRIP TAPE

A remarkable new method for opening shipping cartons is made possible by "Wolco Rip-A-Tape", the new red, reinforced gummed tear-strip tape made by General Gummed Products, Inc. Rip-A-Tape is applied by the box manufacturer to the inside of the carton blank leaving a convenient tab for ripping

the box open in much the same manner as a pack of cigarettes. New Rip-A-Tape is applied with existing box taping equipment.



Among its advantages Rip-A-Tape makes carton opening easier and faster, and eliminates possibility of damage to contents. It prevents injury to personnel since no knife is needed. In addition Rip-A-Tape helps sell merchandise by conveniently turning the shipping carton into a display unit.

Rip-A-Tape is ideal for corrugated cartons that are either taped, glued or stitched. Supermarkets, consumers and everyone now struggling with present methods appreciate the ease of Rip-A-Tape.

WATERPROOF PROTECTIVE PAPERS

A new asphalt laminated reinforced protective wrapper, identified as Type MR Wrap-Dri has been produced by Thilmany Pulp & Paper Company. This new wrapper is made up of two outer plies of sturdy kraft, laminated by an exclusive double-coating process with specially blended asphalt.



The reinforcing media is a closely formed mat of twisted fibres which is firmly imbedded in the asphalt and provides excellent all-directional tear and puncture resistance. In addition to the dispersed fibre reinforcement, three edge strings provide tear-proof edges. Supplementary longitudinal fibres at regular intervals across the web of the sheet give added strength.

The new protective paper is available in widths up to 10 feet without splice or seam. It can be further enhanced by print-decorating for trademark identification at costs averaging about 30 cents per thousand square feet.

Literature and prices of products mentioned can be obtained if you drop a post card to News Editor, SHIPPING MANAGEMENT, 425 Fourth Ave., New York 16, N. Y.

Companies having new product stories should send them to the same address.

TRAFFIC REPORTER

The Annual Outing of the Transportation Club of Decatur (Illinois) was held in June at the South Side Country Club. Events included Golf, Luncheon and Dinner. Trophies Awarded included the Transportation Club Cup, Wheeling & Lake Erie Cup, and numerous other prizes.

Worcester (Mass.) Traffic Association held its 38th Annual Outing at the Wachuset Country Club on Monday, July 20, 1953.

The Women's Traffic Club of Los Angeles installed its new officers for the year 1953-1954 at a banquet in the Aviation Room of the Hollywood-Roosevelt Hotel, recently. President for the year is Miss Violo L. Olin of Lockheed Aircraft Corp. She is secretary to the General Manager of Shipping and Receiving and has been with Lockheed for approximately 15 years. She has been a member of the Women's Traffic Club since 1941.

The Sixth Annual Golf Outing of the Wisconsin Valley Traffic Club was held at the Merrill Country Club, Merrill, Wisconsin during the latter part of June.

Ross W. Bennington has been appointed to the newly created position of general traffic manager of United States Rubber Company, it was announced today by James W. Harley, the company's director of traffic.



R. W. BENNINGTON

Mr. Bennington joined the company in 1939 as a rate clerk in the traffic department. He was promoted to manager of the rate division in 1942. As general traffic manager he will continue to have his headquarters at the company's gen-

eral offices in Rockefeller Center, New York City.

Mr. Bennington is former president of the New York chapter of Delta Nu Alpha, transportation fraternity. A graduate of Wharton School of Finance, he is a member of the Traffic Club of New York and is a practitioner before the Interstate Commerce Commission.

He lives with his wife and two children at Sylvan Terrace, Yardley, Pa.

The 30th Annual Meeting of the Associated Traffic Clubs of America will be held at the Hotel Statler in Boston, Mass., September 21, 22 and 23, 1953. The Traffic Club of New England, the host club, in cooperation with the Women's Traffic Club of New England, is preparing an appropriate program.

Hotel reservations should be made through the Chairman of the Reservations Committee—Mr. Fred Potts, Assistant Manager, Hotel Statler, Boston, Mass.

The New York Chapter of Delta Nu Alpha Transportation had its annual dinner meeting and installation of officers in June, in the Park Sheraton Hotel, N.Y.C., which was open to both members and guests.

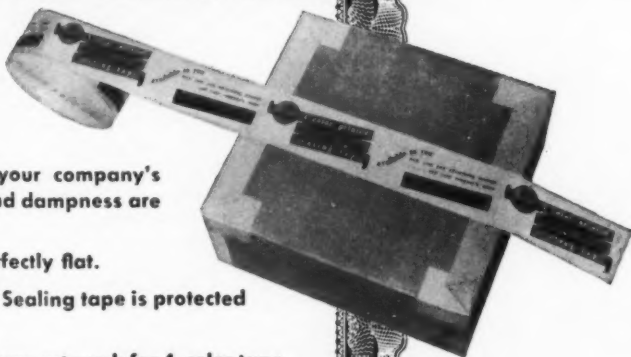
The featured speaker was Charles S. Baxter, chairman of the Railroad's Tariff Research Group.



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RR's Carry Trucks "Piggy-Back" To Speed Shipping, Reduce Jams

A POSSIBLE SOLUTION to the nation's crippling highway traffic glut was offered at the 5th National Materials Handling Exposition.

In a special statement, William A. Bauer, board chairman of The Baker-Rauling Company, Cleveland, described a unique "piggy back" system of freight transport which he says could substantially lower the number of over-the-road shipments and allow more room for passenger car travel. "The piggy back idea", he said, "teams up railroad flat cars with highway trailers for inter-city freight hauls. Instead of being driven over already jammed roadways, loaded trailers are put on flat cars and moved by rail—where they do not compete with commuter and tourist traffic."

The apparently radical shipping method has been tested and found workable, he claimed. "As a matter of fact, the New York, New Haven and Hartford moves more than 500 semi-trailers each week on piggy-back, and the system is now used to a limited extent to bring milk into New York City. Two other major railroads—Chicago Great Western and the Denver and Rio Grande—are now making piggy-back runs."

"Rail carriers say the system has been profitable both for themselves and for highway shippers who have participated."

Bauer pointed out that about 400 semi-trailers leave Pittsburgh daily for New York and other large freight traffic centers. Similar numbers rolling out of important terminal cities have added to the locust-swarm of vehicles on our highways, he continued, until today "pleasure driving" is a soured joke to big-city car owners.

"One large highway shipper estimates his overland hauls would be cut by at least 30%, with the piggy-back method. A shortage of flat cars has been the main deterrent to his participation in the system."

"Piggy-backing is attractive to many shippers because it would combine the flexibility of truck operations in terminal areas with the speed and economy of long-haul transportation by rail."

Free Fall Aerial Delivery

(Continued from Page 11)

250 and 2,000 feet and from speed up to 200 miles per hour.

Some of these containers have been dropped as many as fifteen times prior to rupture. At the present time the development activity is concentrated on machine methods of molding and fabricating these containers for mass production.

Effort is also being concentrated on improving the handling characteristics, i.e., the closure, straps, etc.

It may be interesting to note that one of the desired characteristics of the successful final model is that it shall be able to withstand eight successive drops from an altitude of 2,000 feet on a concrete slab of an airport runway. The concrete slab is being used to simulate the frozen condition of certain earth surfaces which might be encountered in actual use.



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Packing A Punch

(Continued from Page 9)

trade journals, some of which, devoted exclusively to our interests, have yet to celebrate their tenth anniversaries. To their publishers and editors we owe a special debt for broadening our point of view by the emphasis they have given to principles as against single applications. . . . Our colleges, whose catalogues before the war included none of the materials handling courses now offered. . . . Finally, the corps of men interested and experienced in materials handling competent equipment, and only methods analysis will tell what that is. On the other hand, many methods improvements can be made without a penny's worth of capital expenditure. Machines are important, but neither more or less so than men methods, materials, and money.

Along with methods we must consider layout. Improvements in method save manpower; improvements in layout save space. Layout establishes the setting, the arrangement, the physical surroundings for methods. It may be an overriding consideration in determining the method to be employed, especially in an existing building where you must accept the floor-load ratings, ceiling heights, column spacing, and perhaps even differentials in floor levels. Methods and layout must therefore be studied concurrently, for each influences the other.

Occasionally someone will put up a

building and then puzzle over the layout and operating problem. Of course, that procedure is the reverse of what it should be, for the building limits freedom of action in layout. The same thing is true when someone buys equipment first and then tries to develop methods to fit. By starting with equipment, he limits his freedom to find the best method. When we think first in terms of method and layout, we are under no such arbitrary restrictions. We are free to develop and choose that kind of materials handling that most nearly meets our requirements.

The new emphasis on methods I attribute largely to the fact that we are adopting a real engineering approach to our problems. Many companies have strong industrial engineering staffs to serve the operating departments. Operating materials handling men have learned to respect and rely on them to manage their operations and with the drive and courage to continue the search for better methods. We used to number the materials handling professionals in this country in the hundreds; now we number them in the thousands.

These are the obvious evidences that materials handling is coming of age. There are other, more subtle manifestations. . . .

. . . . Let me cite a rudimentary example. The operation was a common one, moving loaded four-wheeled platform trucks from receiving dock to elevator

and moving empties back. The aisle and elevator entrance were always congested with loaded trucks. It took four or five minutes to clear a path and maneuver empties from elevator to dock. Everyone assumed the only answer was more space or equipment, entailing a substantial investment. Then the engineers were given a crack at the problem. They studied it methodically—the unloading rate at the dock, the arrival of workload transporting rate up the elevator, travel distance, the measurements of the trucks and the space available. They watched the operation and saw how the men rammed loaded trucks into any space that happened to be large enough to take a truck, with no plan and no thought for maintaining an aisle. Their solution, verified by the information they gathered, was this: if loaded trucks were placed in an orderly manner, lined up side by side, each would take less space than before. They found that the arrival schedule could be adjusted to provide a more even flow. Under these conditions there was room to store all trucks and still leave an uncongested aisle. The idea worked; the company saved money it might have spent on additional space and equipment. This story gives no hint of the complexity of most engineering studies, yet its simplicity high-lights the fundamental issue: the advantage of bringing the engineering point of view to bear on materials handling problems.

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Listen, Mr. Traffic Manager

(Continued from Page 18)

many other things which could be considered perishables, but are not in this line. Any items which are subject to damage due to temperature changes, such as plastics, film, and certain chemicals could conceivably be considered in this category. As a rule a carrier is not liable for damage to these materials if they are tended to him as a routine shipment without any notation on the bill of lading as to the care needed for transportation of these materials. It is not uncommon to see packages shipped marked "keep in a cool, dry place." Unless the shipper specifically mentions that this material should be refrigerated, any damage which results because of extreme heat could not be considered the fault of the carrier. A carrier can not be expected to know all of the inherent characteristics of certain articles such as plastic articles which might become deformed because of high temperatures.

In cases of chemicals and other materials which might be damaged in extreme temperatures, a notation should be made on the face of the Bill of Lading as well as each individual carton to that effect. The carrier's tariff provides for the care which is outlined by the shipper; he should then transport the material as prescribed and would be liable if damage or deformation occurred. If the carrier's tariff does not provide such service, he should refuse shipment. All in all, it is cooperation between carrier and shipper to insure safe arrival of perishable materials.

During the past two years, the Post Office Department has engaged in activities which they feel would make for a more economical operation by the Department. Parcel Post rates have been increased, and several changes in procedure in scheduling by the operating Post Offices themselves have been brought about. So far we have noticed no change in the operating cost as such. It is our feeling that the Post Office Department has approached the problem from the point of view of cutting down or eliminating services rather than from the practical business viewpoint of thoroughly investigating the methods, procedures, and handling techniques of each unit to bring about a more efficient and economical operation. For example, very little has been done in the way of materials handling to cut down the large cost of operation. In any business dealing with transportation, this is the first item checked, and in all cases brings about large savings. A second reason for their failure to cut their cost is that the Post Office Department fails to realize that by cooperating with large shippers of parcel post they might affect tremendous savings. The Post Office Department now requires that all mail regardless of shipper be delivered by the shipper's trucks to the Post Office loading platform. We know of several large shippers of parcel post, who would be glad to take over the duties of sacking



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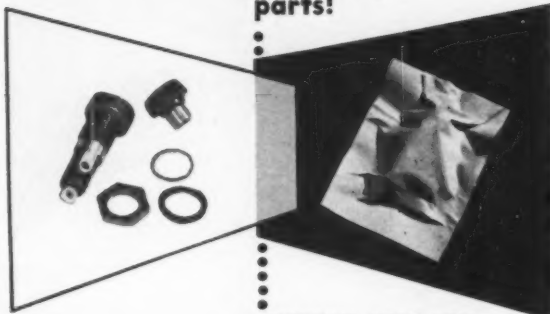
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and sorting the mail if the Post Office truck were allowed to pick up at their plant. This would not only cut down on the congestion at the Post Office and eliminate the services of many individuals, but it would also be extremely helpful to industry itself.

In our own operation, for example, we are delivering approximately four truck loads of parcel post from our shipping area to the Post Office Department each day. Upon arrival at the Post Office, our men throw the parcel post into hampers which are carted into the Post Office and sorted by the postal employees. After sorting, this material is placed in sacks according to destination and loaded by the employees onto another truck which carries it to a main distributing point. This is costly both from our standpoint and from the standpoint of the Post Office. If the Post Office Department would allow us to sort and sack the mail in our own area and then have their trucks pick it up at our door, it would result in a substantial savings to both.

These are but a few of the incidents which the Post Office Department is ignoring in their drive to cut down cost. We feel that a business-like approach should be taken toward this problem, and that the Post Office in conjunction and cooperation with larger shippers could affect and devise adequate systems and procedures for these cases.

New Book On Materials Handling

(Continued from Page 18)

any industrialist or plant manager, after reading it, will 1.) be moved to question the efficiency of his present system; 2.) have a clear idea of where to look for bugs; 3.) find enough practical, detailed guidance to know what to do about it.

This guidance is in various forms: richly documented case histories of actual installations, worked out from scratch (for example, the methods analysis of the Oldsmobile crankshaft grinding operation; and the L. Bamberger warehouse study); charts, diagrams, photographs, and tables (329 in all), depicting equipment, layout analysis, flow of materials, check-lists, etc.; and continual reference to specific problems met by specific companies, mentioned by name to allow further inquiry and consultation.

With all his enthusiasm and knowledge, Prof. Immer does not go overhead for any one technique. Even palletization, which has worked miracles in increasing handling speed and reducing breakage and pilferage, is soberly analyzed, and its drawback of unprofitable weight in relation to long hauls is clearly presented. The merits and shortcomings of every method and piece of equipment are outlined to help the reader make decisions on his own handling problem. Jib-crane, gantries, fork-lifts, straddle-trucks, lifts, belts,

rollers, chutes, ropeways—all are placed clearly in the over-all picture.

That the author makes frequent reference to his previous book, *Layout Planning Techniques*, is the result not the desire for self advertisement but of inseparability of the two fields. The use of models, templates, and flow charts is fully described. Another indication of the unity of the productive process is Immer's stress on centralized organization and cost-accounting in helping decide the extent of mechanization and the kind of equipment.

The human element is not neglected. Immer faces the problem of selling top management on the savings made possible by a rational handling program, and also the need to make the operative employees understand the value of the new systems and respond to training in their use. Immer points out that each department finished its training program in work-simplification at RCA Victor a few years ago, the number of suggestions from that department skyrocketed (p. 336). Westinghouse Electric dramatizes its program with a "truck rodeo" contest involving inspection, truck handling, load handling, load judgment, distance judgment, and general rules.

An important chapter deals with Safety—22% of all disabilities to workers result from handling objects, the National Safety Council estimates, and the total cost of industrial accident in this country was estimated by the Council to have been \$2 billion in 1940.

Useful appendixes include a list of sources of information; the author's suggested classification for materials handling information, covering equipment, industries involved, types of operation, materials handled, and systems and organization, all subdivided in great detail; a bibliography of magazine references for each chapter (the author mentions that 1500 articles were published in the field in a year); and a bibliography for specific industries.

(By Editorial and Research Services)

The trucking industry buys enough gasoline annually—9.2 billion gallons—to make five stacks of one-gallon cans reaching to the moon.

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Maytag's New Container Results In Substantial Savings

A closed container of corrugated fibreboard designed primarily to give adequate protection to Maytag's new automatic washing machine also provides two other important advantages—(a) a 66 per cent saving in container handling time and (b) a high billboard potential. It is a three piece heavy-duty job of 7/16-in. double-wall fibreboard.



A 66% saving in container handling time was achieved by Maytag with their new container of double-wall fibreboard (shown above in the conveyor assembly line). Steel strapping guarantees safe arrival of the shipped units.

The tube section of the container is cut with four 3-in. flaps at both top and bottom. Caps, having double folding flaps, fit over and interlock with the top and bottom of the tube section. To guarantee safe arrival of the shipped units, bands of 5/8-in. steel strapping are tensioned around each flap with a pneumatic tool. This closed container, quickly and easily assembled, seals the washing machine from dirt and dust.

In place of standard forks on its lift trucks, Maytag has installed special short pick-up fingers designed to fit under the flaps of the new containers. The strength of the steel strapped flap on the package is sufficient to allow these fingers to carry two packaged washing machines at a time. Compared with former handling methods a 66 per cent reduction in container handling time is realized.

—Photo and Data Courtesy Acme Steel Strapping Co., Inc.

"Airdock" For Dual Level Plane Unloading Now Under Study

An "airdock" which would revolutionize present air-line methods of loading and unloading passengers, baggage and cargo has been designed by United Air Lines and now is under study for initial installation, it

is disclosed by D. F. Magarrell, vice president-transportation services.

The proposed structure would be equipped with special tracks, conveyor belts, and other devices for mechanized loading and unloading of aircraft. An incoming plane would be taxied onto the tracks, then towed to a predetermined position where gas, oil and other supplies would be available at fixed locations.

Passengers would deplane directly into the second floor of the airdock, thus eliminating ramp stands and providing shelter in bad weather. By the time they walked to the baggage claiming counter on the first floor, their luggage—whisked in by conveyor belts—would be arriving for pick-up. Air mail, express and freight meanwhile would be swiftly handled by conveyor.

Refueled and reloaded without benefit of the many ramp vehicles currently in use, the plane would be ready for take-off in far less time than now possible.

1953 "Short Course" Program

Continued from Page 16)

Cleveland, chairman of the committee, explained after the meeting:

"The field of industrial packaging and materials handling as it relates to production, transportation, warehousing, and distribution is a fast expanding field that is attracting the young engineer.

"For this reason, we believe it highly desirable that the short course offer intensive sessions on both the 'fundamentals' and in more complex and advanced subjects in our field. Thus, the short course will furnish a rich source of new knowledge and learning to both junior and senior engineers alike."

The subject matter of the over-all curriculum will be divided fairly between packaging and materials handling. Topics to be stressed specifically include the needs of the armed forces; the methods, materials, and economics of materials handling; arsenal products, electrical and electronics products, machinery and metal products, textile and mill products, cushioning and corrosion prevention, and problems peculiar to old plants.



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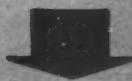
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